

## **CLAIMS**

We claim:

1. An array hybridization apparatus for separating a slide from a substrate backing, comprising:
  - (a) A slide for holding an array;
  - (b) a substrate backing being positioned opposite the slide;
  - (c) a gasket interposed between the slide and the substrate backing; and
  - (d) a spacer interposed between the slide and the substrate backing adjacent to the gasket wherein when a force is applied to the substrate backing and the slide a portion of the slide separates from the substrate backing.
2. An array hybridization apparatus as recited in claim 1, wherein the gasket comprises a deformable material.
3. An array hybridization apparatus as recited in claim 1, wherein the spacer comprises a substantially non-deformable material.
4. An array hybridization apparatus as recited in claim 1, wherein the gasket is attached to the slide.
5. An array hybridization apparatus as recited in claim 1, wherein the gasket is attached to the substrate backing.
6. An array hybridization apparatus as recited in claim 1, wherein the gasket comprises a portion of the substrate backing.
7. An array hybridization apparatus as recited in claim 1, wherein the gasket is attached to both the slide and the substrate backing.

8. An array hybridization apparatus as recited in claim 1, wherein the spacer is attached to the slide.
9. An array hybridization apparatus as recited in claim 1, wherein the spacer is attached to the substrate backing.
10. An array hybridization apparatus as recited in claim 1, wherein the spacer is attached to both the slide and the substrate backing.
11. An array hybridization apparatus as recited in claim 1, wherein the spacer comprises a material selected from the group consisting of polyurethanes, plastics, acrylics, metals and non-deformable or less deformable polymers.
12. An array hybridization apparatus as recited in claim 1, wherein the spacer is between 25 to 500 microns in height.
13. An array hybridization apparatus as recited in claim 11, wherein the array hybridization chamber is between 25 to 1000 microns in height.
14. A method of disassembling an array hybridization apparatus having a slide contacting a gasket and spacer, comprising:
  - a. applying a force to the edge of the slide to separate a portion of the slide from the substrate backing.
15. An array hybridization apparatus as recited in claim 1, further comprising a living hinge.
16. An array hybridization apparatus as recited in claim 1, further comprising a lever rotatably mounted on a hinge.